
APPENDIX E
APPROVED SUPPLIERS OF MECHANICAL CONNECTORS FOR REINFORCING BARS
(MECHANICAL SPLICES)

BASIS OF ACCEPTANCE

Mechanical splices shall be used only if pre-approved or detailed on the plans.

Acceptance of mechanical splices shall be on the basis of certification from approved fabricators.

Mechanical splices shall develop in tension or in compression as required at least 125 percent of the specified yield strength of the bars being spliced.

Samples shall be secured at the project site. Two splices out of each 100 or portion thereof shall be secured at random along with a representative sample of the specified reinforcing bars of the same size and grade.

With each shipment, the supplier shall furnish a letter of compliance identified with the county, project number, and contractor. The letter shall itemize the following:

1. A certification statement that the connectors or couplers were fabricated from steel produced to a referenced ASTM Specification and is fully traceable to the original U.S. steel-producing mill.
2. Couplers shall be suitable for connecting deformed reinforcing bars manufactured to ASTM A 615/615 M Grade 40 (300) or Grade 60 (420) black, epoxy, or galvanized.
3. Couplers shall meet the minimum tensile and yield requirements for the steel grade 60 (420) specified in ASTM A-615/A615 M.
4. If epoxy-coated couplers are used, then a statement for epoxy coating shall include the name of the coating company, and compliance with AASHTO M-254 Type B coating.
5. Copies of Mill Test Reports of steel heat numbers used in the fabrication of the couplers on a project-by-project basis.
6. Quantity of couplers shipped to a project

NOTE: Supplier shall retain Records of Coating Reports and Mill Test reports for a period of three years.

FABRICATORS/SUPPLIERS

PRODUCT NAME

ADDRESS

Barsplice Products, Inc.

Zap ScrewLok System

1330 Grand Road
Beavercreek, OH 45430

Bar-Lock

Bar-Lock (MBT) Coupler

PO Box 28280
Bellingham, WA 98228-0280

Dayton/Richmond Corp.	Mechanical Reinforcement Connection System	636 South 66 th Terrace Kansas City, KS 66111
Erico, Inc.	Lenton Reinforced Bar Coupler	34600 Solon Road Solon, OH 44139-2695

DESCRIPTION - Zap ScrewLok System

The Zap ScrewLok System is a full tension-compression-coupling device, which provides structural continuity between reinforcing bars. This coupling device consists of a shaped, steel sleeve with two converging sides. A series of cone-pointed screws are assembled along the sleeve length. Rebars are inserted from each end to a center stop. When screws are tightened, they indent into the surface of the rebars. The heads of the screws will shear off at a maximum tightening torque. This coupling device may be ordered in black, epoxy-coated, or galvanized, depending on the specified bar type requirement.

DESCRIPTION-Bar - Lock (MBT) Coupler Systems

The Bar-Lock Couplers are made of Hot-Rolled Steel tube, conforming to ASTM A-519 specification requirements. These couplers are designed with internal serrated strips welded at the end of the tube and a series of lock shear bolts and a removable center-pin for easy reference to the center to the coupler. The Bar-Lock Coupler system is a full tension/compression coupling device. These couplers are offered in multiple sizes to suite different bar sizes, and are available in Black for use only with black bars or epoxy coated for use only with epoxy-coated bars.

Bar-Locked couplers are designed to perform both as a "standard" coupler and as a "position" coupler; therefore, they maybe used when both bars are free to rotate or when one or both bars are fixed to rotate and/or when both bars are fixed in place.

RECOMMENDED INSTALLATION TOOLS

Manufacturer recommended installation tools are required.

DESCRIPTION - Dayton/Richmond Dowel Bar Splicer System

The Dayton/Richmond Dowel Bar Splicer System is made of two pieces.

1. The Dowel Bar Splicer (DB-SAE) is a one-piece unit, integrally forged from Grade-60 rebar material. It is available in #4 through #11 sizes.
2. Dowel IN (DI) is also manufactured from Grade-60 rebar material and is available in sizes corresponding to the DB-SAE splicer. The end of the bar is enlarged by forging before threading so that the cross sectional area of the bar is not reduced during threading operations.

Both pieces of the completed splice are manufactured from one single size of rebar material. The system does not require welding, coupling or extra pieces. Dowel-ins are available straight or hooked. The Dayton/Richmond Dowel Bar Splicer System is only approved as plain (with no epoxy coating).

DESCRIPTION – Lenton (Erico) Reinforcing Bar Coupler

Lenton mechanical splicers are manufactured by Erico. It is a tapered, threaded coupler, manufactured from high quality steel and behave as continuous lengths of reinforcing steel bars by providing full strength in tension, compression and stress reversal applications. The bar ends must be taper threaded using manufacturer's bar threading equipment to ensure proper taper and thread engagement. Bars shall be installed to the manufacturer's requirements.

The Lenton mechanical splice can be tightened using conventional wrenches in 4-4½ turns. Erico also supplies adjustable torque wrenches. This wrench can be used to both install couplers and verify/inspect torque values after installation.

For best possible splice, Erico recommends the following torque wrench settings:

Bar Size (English)	Bar Size (Metric)	Wrench Torque Settings	
		ft./lbs.	Nm²
3	10	30	40
4	12	30	40
	14		80
5	16	90	120
	18		150
6	20	130	180
7	22	160	220
8	25 (24-26)	200	270
9	28	200	270
	30		300
10	32	200	300
	34		300
11	36	200	300
	38		
	40		
14	43		
	50		
18	57		

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